-   a means embodying the present invention is capable, when realized, of providing the technical result expected by the applicant.

CLAIMS

1. A system for data collection through an alternate current supply network comprising one main unit and a plurality of slave units, in which said main unit sends a timing signal of a predetermined form, consisting of one or several characters, which is simultaneously received by all slave units, wherein as character synchronization events all system units use zero crossing points of the

fundamental harmonic of system supply network voltage and a main unit sends said timing signal strictly periodically at equal intervals while a slave unit of number N transmits its data during half-cycle N of network fundamental voltage counting from a timing signal end point.

2. A system for data collection according to claim 1, wherein in case of temporary absence of timing signal slave units continue data transmission within "their" half-cycles of network fundamental voltage computing their temporary location from a known half-cycle value of timing signal

3. A system for data collection according to any one of claims 1,2, wherein a source supplying a timing signal is not a system main unit but some other individual device.

4. A system for data collection according to any one of claims 1,2, 3, wherein a timing signal is subjected to modulation and used for broadcast data transmission from a main unit to slave ones.

5. A system for data collection according to any one of claims 1,2,3, wherein all signals being transmitted by a main and slave units have duration equal to 1/3 of a network voltage half-cycle and are centred about zero crossing points of the fundamental harmonic of system supply line voltage.

ABSTRACT

The invention relates to electrical network communications engineering and can be used in systems for automatic data collection from electric, heat, water, gas meters etc. The technical result is significant simplification of the interior structure of slave units and increased noise stability of a system. This result is achieved by using zero